REMARKS

Claims 1 to 32 are all the claims pending in the application, prior to the present amendment.

The Examiner has not acknowledged applicant's claim for priority, or receipt of the certified copies of the priority documents. Applicant requests the Examiner to make such acknowledgements.

The Examiner has attached to the Office Action a copy of the Form PTO/SB/08 filed with the Information Disclosure Statement of May 13, 2005. The Examiner has initialed and dated this form to indicate that the Examiner has considered and made of record the documents listed on this Form, except for five Abstracts which the Examiner has crossed off this Form.

At page 2 of the Office Action, the Examiner, in the section entitled "Information Disclosure Statement," states that he has considered the relevance of all foreign patent documents insofar as the translated Abstract indicates. The Examiner does not provide any reason why he crossed off the Abstracts from the Form. Applicant submits that the submission of a copy of the Abstracts and their listing on the Form PTO/SB/08 fully complied with the requirements for the filing of an Information Disclosure Statement, and that the Abstracts should not have been crossed off from the Form. Accordingly, applicant requests the Examiner to send another copy of the Form in which the Examiner initials and dates the Abstracts.

At page 2 of the Office Action, the Examiner states that he considers any and all documents cited against the present application by a foreign patent office to be material to

patentability, and requests that such documents be submitted. The Examiner further states that appropriate translations are expected.

In the present application, the foreign language patent documents that were submitted were cited in either the International Search Report or the present specification. English language Abstracts were submitted for each of the foreign language documents, but translations of the entire documents were not submitted. Although the Examiner states that translations are expected, applicant points out that an applicant is not required to prepare a new translation if one does not already exist.

Claims 9, 13 and 22-27 have been rejected under the second paragraph of 35 U.S.C. §112 as indefinite. The Examiner sets forth two reasons for this rejection. Applicant discusses each reason below.

The Examiner states that the term "hardly-graphitizable" in claim 9 is a relative term which renders the claim indefinite. The Examiner states that the term "hardly-graphitizable" is not defined by the claim, and that the specification does not provide a standard for ascertaining the requisite degree of graphitization. The Examiner states that one of ordinary skill in the art is not reasonably apprised of the scope of the invention.

In response, applicant has amended claim 9 and the specification at various locations to change the term "hardly-graphitizable" to -- non-graphitizable --, which is a well known term. The present specification describes at page 17, lines 19-28, that a hardly-graphitizable carbon material is one which produces a so-called "hard carbon" by heat treatment, and enables one to control the expansion and contraction of the carbon base material when charging and

discharging. The term "hard carbon" refers to a "non-graphitizable" carbon. See U.S. Patent 6,806,003, which refers to a "hard carbon (nongraphtizable)" at column 4, lines 29-30. See also the attached pages 17-20 from a 2003 thesis by Yeuping (Jane) Yao ("Carbon Based Anode Materials for Lithium-Ion Batteries," a thesis submitted in fulfillment of the requirements for the award of the degree Honours Master of Materials Engineering, from the University of Wollongong, New South Wales, Australia, Institute for Superconducting & Electronic Materials, Faculty of Engineering (2003)), which indicate that a "hard carbon" is a "non-graphitizable" carbon.

The Examiner states that claims 13 and 22-23 provide for the use of activated carbon, but that the claim does not set forth any steps involved in the method/process and, therefore, it is unclear as to what method/process applicant is intending to encompass.

In response, applicant has canceled claim 13, and has amended claim 22 by changing change the word "using" to –comprising, and has amended claim 23 by changing the word "uses" to --contains--.

In view of the above, applicant submits that the claims comply with the requirements of the second paragraph of 35 U.S.C. § 112 and, accordingly, requests withdrawal of this rejection.

Claims 13, 22 and 23 have been rejected under 35 U.S.C. § 101 because the claim recitation of a "use", without setting forth any steps involved in the process, results in an improper definition of a process.

Applicant submits that the above amendments in connection with the rejection of these claims under 35 U.S.C. § 112 as indefinite overcomes this rejection.

Claims 24-27 have been objected to. The Examiner states that each of these claims is introduced by the word "The" to describe various articles, but the claims from which these claims depend do not refer to the articles.

Applicant has amended these claims to change the word "The" to --A -- or -- An --. Applicant submits that these amendments overcome this objection.

Claims 1-10, 13, 14 and 24-33 have been rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent 4,937,223 to Yamaguchi.

In addition, claims 1-10, 13, 14 and 24-33 have been rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent 4,937,223 to Yamaguchi.

Applicant submits that Yamaguchi does not disclose or render obvious the subject matter of claim 1 as amended above and, accordingly, requests withdrawal of this rejection.

The present invention as set forth in claim 1 as amended above is directed to an active carbon comprising an alkaline earth metal compound in the inside of the particle and having a BET specific surface area of 10 to 2,000 m^2/g as determined by a nitrogen adsorption method, and wherein the volume of pores having a pore size of 20 to 50 Å is in the range of 0.02 ml/g or more as determined by the BJH method using the nitrogen adsorption method.

Thus, applicant has amended claim 1 to incorporate the recitations of claim 8 to recite that the volume of pores having a pore size of 20 to 50 Å is in the range of 0.02 ml/g or more as determined by the BJH method using the nitrogen adsorption method. Claim 8 has been canceled.

As disclosed in the present specification, the present invention provides an electric double layer capacitor prevented from expansion of the electrode, and which has high capacitance.

The Examiner states that Yamaguchi discloses pore sizes in the range claimed (Yamaguchi discloses at column 4, lines 29-32, "pore size distribution has a characteristic such that pores having a pore size within a range of from 15 to 100 A are predominant"). The Examiner further indicates that Yamaguchi teaches BET surface areas within the claimed range and discloses an activated carbon.

With respect to the characteristics of the volume of pores having a pore size of 20 to 50 A that is in the range of 0.02 ml/g or more, which characteristics now appear in claim 1, the Examiner argued that Yamaguchi discloses pore sizes within the claimed range (see Fig. 1, and col. 4, lines 8-13 and 29-32), and in view of the surface areas and reagents disclosed by Yamaguchi, this implies the properties of claim 7, 8 and 10.

The Examiner thus argues that Yamaguchi inherently satisfies the recitations of these claims.

Applicant submits, however, that Yamaguchi does not inherently disclose the recitations of claim 1.

Applicant points out that in the art of activated carbons, it is commonly known that the pore distribution of a product may become completely different depending on the materials employed and the activating conditions, even when using the same activating agent. It is also known that the pore distribution of a product may become different, even for particles that have

the same BET specific area. Therefore, the Examiner's assertion that the product of Yamaguchi inherently possesses the characteristics of the claimed product is not correct.

For example, as discussed in the Conclusions at page 502 of the attached article (Tseng, "Mesopore control of high surface area NaOH-activated carbon," *Journal of Colloid and Interface Science* 303:494-502 (2006)), the micro pore ratios change while the BET surface area remained nearly constant. Also, the pore distribution is greatly influenced by differences in the activation conditions, as commonly known to those of ordinary skill in the art.

Applicant points out that "anticipation by inherent disclosure is appropriate only when the reference discloses prior art that must necessarily include the unstated limitation." See, *Atofina v. Great Lakes Chem. Corp.*, 441 F.3d 991, 1000 (Fed. Cir. 2006). Here, there is nothing to indicate that Yamaguchi "must necessarily" include the claimed recitations. Further, there are many legal decisions that indicate that inherency cannot be relied on to show obviousness. See, for example, *In re Newell*, 13 USPQ2d 1248, 1250 (Fed. Cir. 1989); *In re Naylor*, 152 USPQ 106, 108 (CCPA 1966); *In re Spormann*, 150 USPQ 449, 452 (CCPA 1966).

Still further, Yamaguchi does not teach or suggest the conditions for combining an activated carbon comprising an alkaline earth metal and a volume of pores having a pore size of 20 to 50 A that is in the range of 0.02 ml/g or more. In addition, Yamaguchi does not disclose the unexpected effect of the present invention that provides an electric double layer capacitor prevented from expansion of the electrode, and which has high capacitance. Therefore, the present invention is not obvious from Yamaguchi.

In view of the above, applicant submits that Yamaguchi does not disclose or render obvious the subject matter of the present claims and, accordingly, requests withdrawal of this rejection.

Claims 1-4, 7-15 and 24-31 have been rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent 6,414,837 to Sato et al.

In addition, claims 1-4, 7-15 and 24-33 have been rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent 6,414,837 to Sato et al.

With respect to claim 8, whose recitations have been incorporated into claim 1, the Examiner argues that it is expected that Sato et al disclose the properties claimed, owing to the similarity of the activation agents and BET surface that is taught.

In response, and as discussed above, in the art of activated carbons, it is commonly known that the pore distribution of a product may become completely different depending on the materials employed and the activating conditions, even when using the same activator agent. It is also known that the pore distribution of a product may become different, even for particles that have the same BET specific area. Therefore, the Examiner's assertion that the product of Yamaguchi inherently possesses the characteristics of the claimed product is not correct.

As discussed above, and as discussed in the Conclusions at page 502 of the attached article (Tseng, "Mesopore control of high surface area NaOH-activated carbon," *Journal of Colloid and Interface Science* 303:494-502 (2006)), the micro pore ratios change while the BET surface area remained nearly constant. Also, the pore distribution is greatly influenced by

differences in the activation conditions, as is commonly known to those of ordinary skill in the art.

Further, Sato et al do not teach or suggest the conditions for combining an activated carbon comprising an alkaline earth metal and a volume of pores having a pore size of 20 to 50 A that is in the range of 0.02 ml/g or more. In addition, Sato et al do not disclose the unexpected effect of the present invention that provides an electric double layer capacitor prevented from expansion of the electrode, and which has high capacitance. Therefore, the present invention is not obvious from Sato et al.

In view of the above, applicant submits that Sato et al do not disclose or render obvious the presently claimed invention and, accordingly, requests withdrawal of this rejection.

Claims 1-15 and 24-33 have been rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent 6,414,837 to Sato et al.

The Examiner does not provide any additional comments in this rejection, except with respect to claim 5.

Claim 5 depends from claim 1. Accordingly, applicant submits that claim 5 is patentable over Sato et al for the same reasons as discussed above in connection with claim 1.

In view of the above, applicant submits that Sato et al do not disclose or render obvious the subject matter of the present claims and, accordingly, request withdrawal of this rejection.

Claims 1-33 have been rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent 6,414,837 to Sato et al in view of the following five references: (a) U.S. Patent 7,061,749 to Liu

et al, (b) U.S. Patent 6,842,328 to Schott et al, (c) U.S. Patent 6,491,789 to Niu, (d) U.S. Patent 6,454,816 to Lee et al and (e) U.S. Patent No. 6,205,016 to Niu.

The Examiner asserts that with respect to the recitations relating to the addition of carbon nanotubes/fibers, the Examiner takes "official notice" that the use of nanotubes and/or fibers in capacitors is old and known. In support of the official notice that the Examiner takes, the Examiner refers to the five secondary references (a) to (e).

This rejection appears to be mainly directed to dependent claims 15-21, which recite the use of a vapor grown carbon fiber. The Examiner does not provide any further analysis as to his reasons for this rejection.

Applicant relies on the arguments set forth above as to why claim 1 is patentable over Sato et al. The five secondary references do not supply the deficiencies of Sato et al.

In view of the above, applicant submits that the present claims are patentable over the cited prior art and, accordingly, requests withdrawal of this rejection.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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